

Remarks.—The above case is from notes by Assistant Surgeon Hopkinson. The case presents an instance of disease in the serous and mucous tissues advancing at the same time, either of which might satisfactorily account for the death of the patient, who was a man of strong, nervous, determined character, and capable of much endurance. The hydrothorax and heart-affection seemed to mask entirely the disease of the abdomen, and to withdraw attention from its symptoms.

U. S. SHIP PLYMOUTH, *Rio de Janeiro*, May 10th, 1848.

ART. VIII.—*Case of Hydrophobia, treated by Chloroform.* By H.
HARTSHORNE, M. D.

THOMAS ROGERS, aged between twelve and thirteen years, was bitten by a strange dog on the 27th of 6th month, while attempting to prevent him from worrying some geese. The same dog, within a few hours, bit a young man named M'C——, without the slightest provocation. After running hither and thither, quarreling incessantly with other dogs about town, he was pursued by a crowd and killed in the street. M'C—— had the wounded part immediately excised. On the 29th I saw T. Rogers' wound, which was upon the wrist of the left arm, consisting of one deep tooth puncture, which had bled largely, and a scratch, which had scarcely bled at all. I urged upon his father the propriety of excision, even at that time, the second day after the injury; but he obstinately refused consent. He then proposed applying a blister, which I encouraged, and left the case.

About three weeks after, I called to inquire about him. The wounds had healed perfectly; the boy was in excellent health and spirits.

On the 17th of 8th month, I was sent for, and Dr. Spackman was also called. We were told that he had been sick several days; had been drooping on Saturday; on Sunday had pains in his back, then in his sides, then his arms and legs, and his head—flying from part to part; had fever on Sunday night. Then, or on Monday, he asked for a drink; but when it was brought, refused it. His mother threatened a whipping, and he swallowed some, though with difficulty, having "a catch in his throat." This difficulty was now observed repeatedly, and his mother, "thinking it was a caper," scolded him for it. He burst out crying, and said, "Mother, I can't help it." He had burning fever on Monday. The next day, in fanning away the flies, they noticed that he gasped or sobbed spasmodically when the air was thus moved over his face. He complained of pain in the left arm, above the elbow, and his mother found a "kernel" in the axilla. Now the dog-bite was remembered, and a quack, agent for one "Dr. Stoy," was sent for. He brought his "certain cure" decoction, and it was administered. On Wednesday night the boy had raging delirium; he was never entirely rational, I gathered, since Tuesday, if not from a still earlier time. I should have mentioned that on Sunday he took six grains of calomel, followed by castor oil, which operated well.

We found him delirious, though not violent; with a feverish pulse and

hot skin, though covered with sweat; decidedly salivated, with some swelling of the soft parts about the jaw, and a tongue covered with yellowish brown fur. His state was one of stupidity, with open and watery, though heavy eyes, somewhat like the expression of the excited stage of intoxication. The most striking type, however, of his physiognomy, was that of a kitten which I had seen poisoned with a decoction of kalmia.

Unwilling yet to believe it hydrophobia, I supposed the existence of remittent fever, with salivation by medicine. I offered him cold water in a teaspoon, and he swallowed it without noticeable difficulty, whilst lying on his back. Dr. Spaekinan had seen hydrophobia before. He fanned the boy with his hat, and the sobbing spasm was produced. This excited his suspicions, from its similarity to the symptom he had observed in two other cases.

As he was costive for some days, an enema and a dose of cream of tartar and jalap were directed in the afternoon. His father now sat him up in bed, and offered him a bowl of water. He began to gasp at once, and after two or three forced swallows, gave it up, and sank back convulsively on the pillow. He can still drink with less difficulty from a spoon, and on his back. We see, therefore, no urgent symptoms but those of fever. Spiritus mindereri was prescribed, the hair cut short, and the room aired, avoiding an immediate draught on him, which would bring on the spasmodic breathing at once.

In the evening, rather more actively delirious. At midnight he complained to me of pain in his left arm, from the elbow to the arm-pit, "like cramp." He spoke of this two or three times afterwards, in the course of his illness, but it did not seem to be permanently predominant. The pulse increases in rapidity, and loses in force. The next morning there was no important change. The bowels not being acted on, a dose of salts was given. I also had a cataplasm of tobacco put around his throat, and left there all day.

The principal peculiarity, considering it as hydrophobia, was, that the symptoms were not mortally pressing, after an illness of four or five days. But it happens that nearly all the detailed cases have been in adults. Might not age modify the duration of the disease, as youth appears to have more vital resistance than mature age; for instance, under surgical injuries?

A dose of castor oil was required before defecation was produced. The tobacco did not make him sick. In the afternoon he was more talkative. The spasms, as before, on drinking or being fanned. A piece of lint, wet with strongest tinct. rad. aconit. and chloroform, was put over the throat, covered with oiled silk. Mr. Nunneley has made a plausible suggestion of the locally anæsthetic effects of this latter agent. (See *Med. News*, Aug. 1847.) I also began the internal use of chloroform in mucilage, my impression, from other trials, being that it simply reduces the vividness and force of all sensation. Half a dozen leeches were ordered behind each ear, to relieve the turgescence indicated by the dark flush of the face, throbbing, full temporals, and delirium.

At eight in the evening I found he had been worse from the time of the leeching, which had been only in part effected, on account of his struggles. He now fights, curses, and threatens us constantly; is *raging mad*. Once he declared he would bite me; but mostly throwing stones, using his nails—which he did once on one of his attendants—and setting his dog on us, were his fancied modes of combat. And it is a popular error to suppose

that biting is a peculiar propensity in the disease: angry, furious delirium is present, but it shows itself in the use of means and weapons customary and natural to the individual. His father persuaded him several times to try to drink. We succeeded in getting swallowed, with great difficulty, a few table-spoonfuls of chloroform mixture, and then the spasms increased to such a painful extent that it was impossible to get him to drink at all. Not only the muscles of respiration, including the diaphragm, but all the muscles of the neck were spasmodically contracted, throwing the head back for the moment as in tetanus; but, unlike tetanus, in the rigidity instantly disappearing when at rest. From the beginning to the end of the case there has been nothing which the shallowest observer could mistake for tetanus. He could at any time open his mouth wide and put out the tongue, and move his neck when not attempting to drink, or any limb or other part of the body, as readily as in health.

I now tried the inhalation of ether. The coldness caused by its evaporation near his lip, started the spasm every time it was freshly applied; and this finally caused him to resist it so obstreperously, that I was forced to give it up. He had, however, been considerably tranquilized by it. Dr. R. P. Harris was present this evening. The acuite and chloroform were renewed to his throat, and I left him, expecting to find him worse next time.

I went at eleven o'clock with my brother, Dr. E. Hartshorne, prepared to attempt the introduction of a stomach tube, as recommended from the experience of my father, to preserve a means of supplying liquid and nourishment. We found him, however, *asleep*, and he had been so almost since the last visit; but he could be easily roused. Gruel was offered him in a spoon, which at once excited the spasms and furious resistance. Fanning also produced the usual effect. But he had the appearance of being to some extent narcotized. An enema of tinct. opii ζ ss was ordered in case of a return of excitement.

He remained tranquil all night. At seven next morning he appeared decidedly better; pulse softer and less rapid, skin warm, now also dry, which has not been the case before. He is tractable, though wandering; and can drink gruel. I am reminded of the "deceptive remissions," occurring in cases described by authors.

He became worse again at ten o'clock; not so much with violence, as suffering. "It was *horrors* this time," his nurses said. I asked him if he was sleepy; "no, but I'm frightened; those bullocks are chasing me!" He cried bitterly, and had almost constantly the most distressed contortion of the features possible. The pulse is more frequent than last night. The pupil, now and at all stages of the disease, even to the last day, was *natural* in its contraction and dilatation. He can swallow small quantities at a time, to-day; gruel, water and chloroform mixture were given from time to time. Two injections of ζ ss laudanum each were used within two hours. No effect was produced by them, and at four o'clock he was still extremely restless, suffering terrors of apprehension. He cannot now be made to swallow. I began then the inhalation of chloroform, from a handkerchief. He was almost instantly quieted. In a few minutes the lips became slightly blue, and respiration lessened in force; it was then withdrawn, and colour returned. By repeating this whenever the struggling was renewed, I kept him under its influence, most of the time sleeping quietly, for about two hours. The same treatment was continued by an attendant, and another injection of ζ i laudanum was used on the return of uneasiness. He swallows no better, however, and sighs spasmodically

every few minutes. But it is a great end gained to be able thus to control his horrors and violence; if any agency promised hope of cure, it must be one which produces such mitigation and relief, not afforded, I believe, by any other remedial means. The tinct. rad. aconit. was again renewed to his throat.

In the evening he appeared still to be under narcotic influence; but the sighing is perhaps more frequent. Pulse 160. Able to swallow very little indeed. This state continued till near three the next morning, when he became wakeful, but tranquil and more rational than yesterday. Now, however, commenced a rattling in his throat, from the accumulation of thickropy mucus in the fauces and trachea, which threatens to check respiration. Finding the pulse still capable, and that deglutition was improved, for the time, I obtained the presence of Dr. J. W. Wallace, Dr. Spackman, and Dr. E. Hartshorne, to consider the possibility of tracheotomy being called for. In the meantime, however, carbonate of ammonia and brandy-punch were given, and partial expectoration took place; Dr. Wallace was able to remove more of the obstruction by a sponge and forceps, and the operation was given up. The stimulation seemed for a while to improve his condition decidedly. In a few hours the throat was quite clear, after vomiting. But in the afternoon, with a still more rapid and feeble circulation, his violence and misery returned. He vomited repeatedly, and had two or three very offensive passages from the bowels. The chloroform was now longer in producing any effect; and then it did not so thoroughly control his restlessness as before. It was assisted by laudanum injections of $\mathfrak{z}\text{i}$ at a time.

8 $\frac{1}{2}$ P. M. He is in a profound sleep, pulse 175 in the minute, and feeble. He has been so since five o'clock, when he had, during my absence, an injection of $\mathfrak{z}\text{ss}$ of laudanum, being then restless. He also breathed a little chloroform about that time. Fanning him now hardly excites any spasm; but occasionally he opens his eyes with a distressed expression; several times also stretching out the bitten arm, and holding it for some moments at full length.

At midnight my brother found the extreme sensitiveness to cold decided as before; a drop of water on the face causing a violent sh. This is satisfactory evidence that the narcotism has not been *excessive*; for who ever saw a person under the influence of opium evince *any* sensibility at all?

Dr. Spackman had observed this evening a new phenomenon, which was now very striking; it was *emphysema* of the cellular tissue around the throat.* It was swelled considerably, and crackled very distinctly under the finger. We had laid him on his side on the occurrence of vomiting, to prevent the ejection from passing into the larynx; and on account of the swelling of the throat, the head was now thrown backwards. But the muscles of the neck were repeatedly and carefully examined; and not the slightest rigidity was found.

He sank away quietly, and died without further spasm, at about half-past two on the morning of the 21st, having lived at least seven days since the commencement of hydrophobic symptoms. Like most or all of the cases described by Watson and others, it was not asphyxia, but asthenia which destroyed him; asthenia in this case was the direct effect of the peculiar poison; as the exhausting fatigue of his spasms and violence was prevented to a great extent by chloroform, and he was able to swallow some liquid

* In the autopsy of a previous case, Dr. Spackman had observed the existence of globules of air in the veins of the neck, and in those of the brain. Might this not suggest the hypothesis that the materies morbi is a gas-generating poison?

not many hours before death. I saw the corpse a few minutes after he expired, and found it nearly or quite as warm as in health; so that I requested delay in moving it. No post-mortem examination could be obtained.

The case had been seen by Drs. Spackman, W. Harris, R. P. Harris, E. Peace, E. Hartshorne, R. S. Woddrop, C. Wister, J. W. Wallace, and W. D. Strond; most of them, however, while he was under the influence of chloroform.

To resume. The boy was thirteen years old. Was taken sick about six weeks after being bitten by a dog proved to behave as if rabid. Had high fever, which had no remission, and yet no characteristics of typhus or typhoid fever; he was not deaf; had no tympanitis; no petechiæ; but had throughout, excessive sensibility to impressions, particularly those of cold, and about the face; had a difficulty, at times incapability, of swallowing, caused by a spasm which made a violent respiration simultaneous with the attempt to swallow, and thus impeded the latter and endangered the passage of liquid into the windpipe; which symptom was constant, and belongs to no ordinary type of disease; had injections of laudanum, ʒss or ʒj, repeated again and again with no effect: and breathed chloroform for hours, with only short intermissions, with no more effect than to tranquilize him, and produce natural sleep, from which he was, once at least, roused by a return of wild delirium: and yet had no sign whatever of tetanus: no possibility of mania-a-potû: and very little, and only occasional complaint of pain: which pain, when it occurred, except in the first stage, was in the arm which had been bitten by the dog; had also salivation, constant watering of the eyes, and finally vomiting: and whose delirium was, until quelled, of a malicious and furious character, or one of dread, horror, and distress: ending fatally at the end of the seventh day.

What name should be given to such a case? "Hydrophobia" is not appropriate, because in this and other cases they *desire* drink, but are incapable of benefiting by it: would not *dyspotia*, or rabies *dyspotia* (from *δύς*, and *ποτός*, drink), be more correct?

It is a highly important fact, that the inhalation of chloroform, persevered in at intervals, did master the violent delirium and horror of the case. Dr. Smiley of Philadelphia, and Dr. Stout of Easton, have already noticed the same effect; although their cases also were fatal. This removes, at least, one element of evil from the disease. And if any remedial agency can ever give hope of *cure*, it must be, when aided by other means, one which has such control over the symptoms, attained hitherto by no other medicine.

We were deterred from depletion by the lancet by the supposed analogy to tetanus, in which stimulation is mostly requisite and useful. But free bleeding is said to have effected one or two recoveries; and has *à priori* plausibility in its favour, as the disease is inflammatory both in symptoms and post-mortem appearances. We were unwilling to use counter-irritation to the spine, from the idea that death was certain, and that those means only were, therefore, justifiable, which lessened or did not increase suffering.

And the *early* resort to chloroform was prevented by respect for the doubts of those who at first were inclined to regard it as a cause of fever.

With a distinct diagnosis, should another case present, in recollection of the mitigation already obtained—would not the practitioner be justified in commencing with venesection: using chloroform, with discretion, from an early period: and applying some powerful revulsive, aided by a narcotic, to the nucha? Dr. R. S. Woddrop proposed vesication, followed by the free application of a salt of morphia. Perhaps *acupuncture with aconitina* might prove more powerful. This treatment has been found successful in obstinate neuralgia. I used a sort of cataplasm of tinct. rad. aconit. to the throat in the above case. An excessive sensitiveness to incident impressions, and consequently excessive motory action of particular muscles, *including the diaphragm* obviously in this case, as well as those of the throat, seems to be present. Remedies which lessen sensation are the ones, then, which may mitigate the disorder at least. In France, the vapour bath is asserted to have wrought a cure; its efficacy should be tried, and might be aided, as was contemplated in our case, by medication with such articles as tobacco, chloroform, aconite, to produce a powerfully antispasmodic fumigation of the whole surface of the body. Prof. S. Jackson advises bathing in warm oil. When swallowing is impossible, the stomach tube might be inserted through the nostril, as done by Dr. Joseph Hartshorne a number of years since, in the hospital; and life also supported by nutritious enemata.

But careful reflection will only deeply impress the conclusion, that with all the means that man can devise, the malady is one which affords less hope of cure, decidedly, than phthisis; and that prevention by immediate excision (or cauterization?) of the bitten part, is the only safeguard against its result.

ART. IX.—*A case of Fibrous Tumour of the Lower Jaw, in which the left half of that bone was successfully removed at the Temporo-maxillary Articulation.* By S. D. Gross, M. D., Professor of Surgery in the Medical Department of the University of Louisville.

KITTY, a negress, nine years of age, was brought to me for professional advice, on the 2d of May, 1846, by her master, Mr. Lawton, of Rumsey, Kentucky. Eighteen months previously she punctured the left side of her face with a piece of wood, which she happened to have in her mouth as she fell, head-foremost, from a high fence. Some inflammation ensued, but this rapidly disappeared, and nothing further was thought of the acci-